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Windows Phone 8.1 (LUMIA)

Community Group

HOW TO UNLOCK

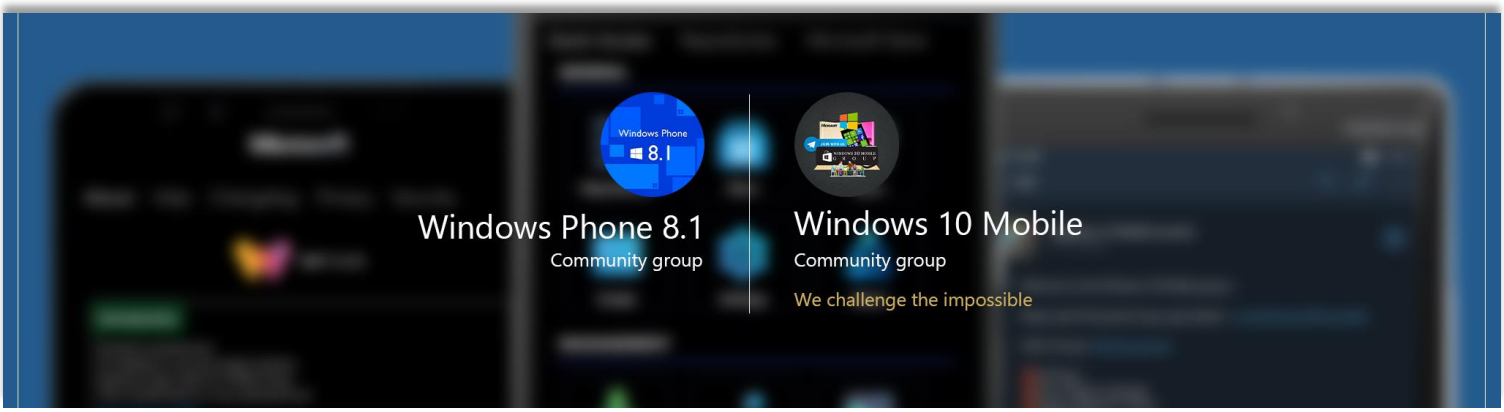
SPEC-B BOOTLOADER

LUMIA DEVICES

COMPLETE-GUIDE

Requirements

- Windows PC (Minimum: Windows 7 SP1 | Recommended: Windows 10 & above)
- SPEC-B Bootloader Lumia device.



W10M Group YouTube Channel

YOUTUBE

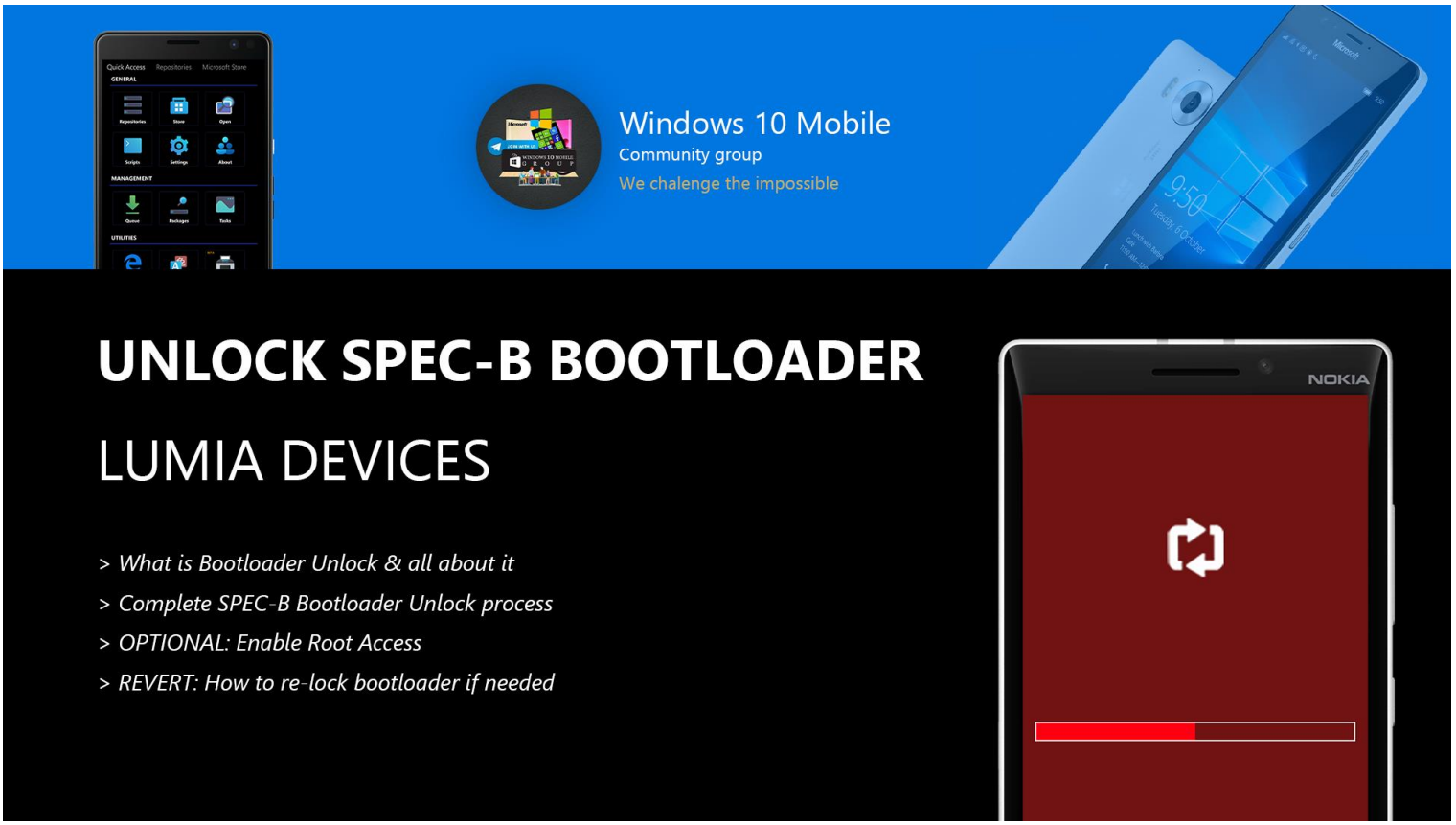
Apart from these documented Guides, we have started the roll up of **Video Versions** of each guide in our YouTube Channel.

Don't forget to **like** and **subscribe**!

How to Unlock SPEC-B Bootloader LUMIA Devices

YOUTUBE

If you prefer video guidance over this documented guide, then you can refer to the video version of this guide from us.



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Introduction

| DISCLAIMER

We aren't responsible for any damage to your device during the Process, do it at your own risk & follow the guide to the letter.

What is SPEC-B Bootloader?

Later models are based on Qualcomm Snapdragon 200 - 800 series. Qualcomm refactored a significant part of their bootloader-code for these new chipsets. And at the same time Nokia also made significant changes to their parts of the bootloader. For reference I will call the bootloaders of these phones: "*Lumia Bootloader Spec B*". So by introducing Lumia's based on the new Qualcomm chipsets all my earlier exploits were rendered useless. I had to find new exploits for defeating the new SecureBoot code, for flashing custom ROM's and for entering Mass Storage mode. Windows Phone Internals version 2 also targets Lumia phones with Bootloader Spec B now.

Which devices has the SPEC-B Bootloader?

- Lumia 1520
- Lumia 430, 435
- Lumia 530, 532, 535
- Lumia 630, 635, 636, 638
- Lumia 730, 735
- Lumia 830
- Lumia 929 (Icon), 930
- Lumia 540
- Lumia 640, 640 XL
- Lumia 550
- Lumia 650
- Lumia 950, 950 XL

What are the advantages of Bootloader Unlock?

There are several of them, to list some;

- *Gain Root Access.*
- *Gain Mass Storage Mode.*
- *Boot another OS like LumiaWOA Project.*

- *Flash Custom FFUs.*

BUT, do you really need Bootloader Unlock?

It's up to the user's needs.

If you are a normal user, Interop Unlock will be suffice for almost all the work.

But if you want those above mentioned advantages to tweak with the device more deeply, then you will neeed Bootloader Unlock.

Are there ay risks involving the process?

Yes**, there is a considerable amount of risk!**

If you follow the guide to the letter without skipping any of the notes, you will be ok but that we cannot gurantee and we can't hold account to any damage to your device as well.

It's a risk you have to take if you wish to follow the guide!

Preparations

Download Windows Phone Internals (WPI)

(*Recommended: WPI 2.9.2 OR higher*)

GITHUB | W.U.T | MEGA

Download & install Windows Device Recovery Tool (WDRT)

(*Always keep WDRT installed for driver purpose*)

MICROSOFT | W.U.T | MEGA

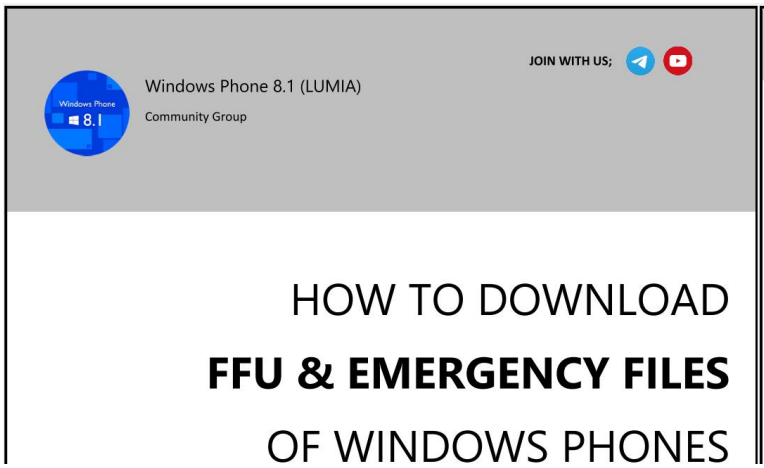
RELATED: How to Download WP FFU & Emergency files

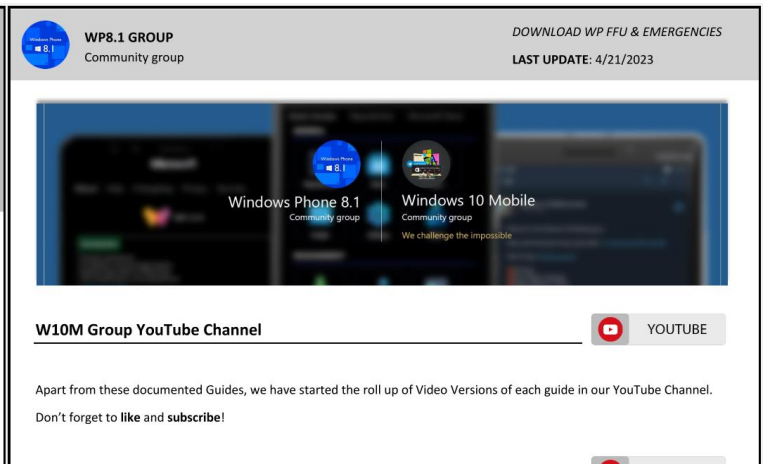
Before following this guide, you will need to have your phone's original FFU, Emergency files & also the Donor FFU already downloaded.

So, if you already don't have these downloaded, then you need to follow the below guides to get them for your LUMIA.

DOCUMENTED VERSION: How to download FFU & Emergency files of Windows Phones

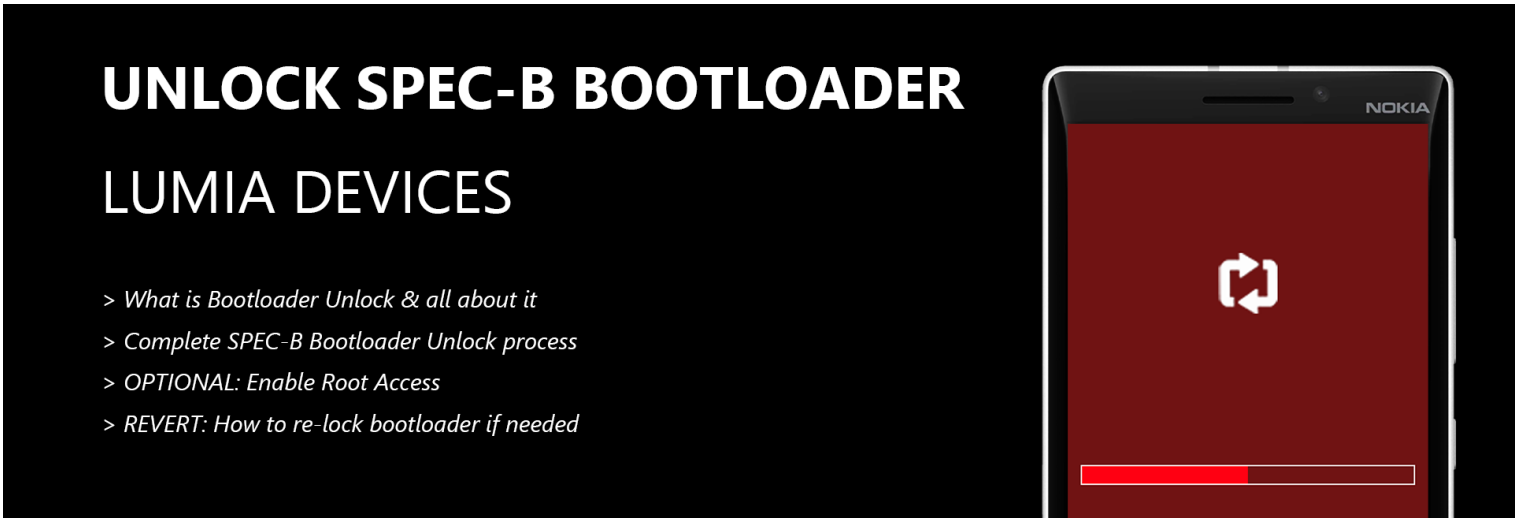
W.U.T | MEGA





VIDEO VERSION: How to Unlock SPEC-B Bootloader LUMIA Devices

YOUTUBE



PRE-NOTES (MANDATORY)

- **Do not try this Unlock in Microsoft Lumia 535 Devices.**

  REASON: Too weak hardware will ultimately fail the Unlock procedure in it's mid stages which needs a Full Flash Update to recover, that measn you will loose all the data in it.

- **None of the data stored in your device will get deleted.**

  BUT: They will be deleted if the unlock fails, so all in all, make sure to backup all the data on your phone before attempting.

- Make sure the **battery is charged at least up to 50%**, its *recommended to Fully Charge the battery* to avoid risk.

- You will need both **Volume down & Power buttons in working order for the unlock** as requiring pressing them at one stage.

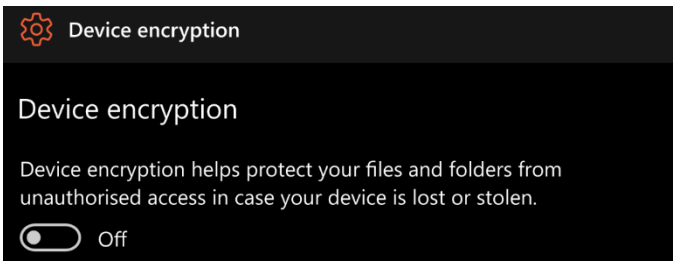
- Make sure **SD Card is Un-plugged** before trying to Unlock.

  You can plug it back once the unlock is successful.

- If the device is running Windows 10 Mobile, make sure *Device Encrpytion (Bit-locker) is turned OFF* in settings.

  Settings → Update & Security → Device Encrpyition

  Turn it **OFF** before attmepting to unlock.



- **Do not Unlock the bootloader right after you flashed.**

  Make sure you have rebooted the device at once successfully into the OS before unlocking the bootloader.

- **It is recommended to use USB 2.0 to connect your phone to the PC** for the Bootloader Unlock as the unlock is better off like that.

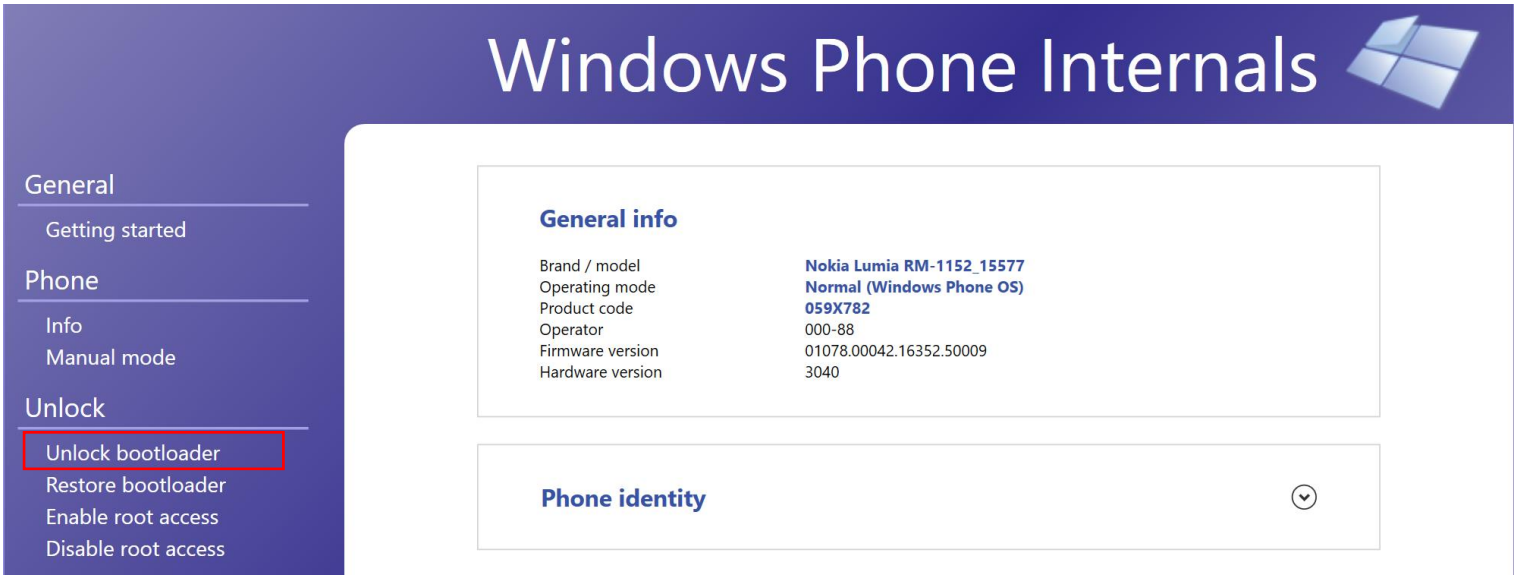
  Also, **do not use USB Hubs & make sure both the cable & the port are confirmed working**.

How to Unlock SPEC-B Bootloader LUMIA Devices

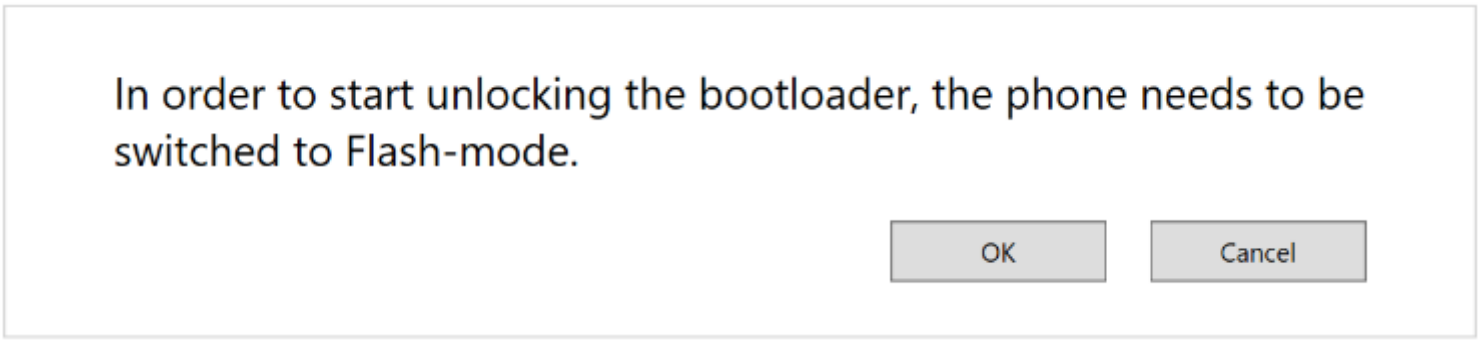
> Connect your Lumia device to your PC via a USB Connection.

> Open Windows Phone Inernals.

It will display the connected device details, click **Unlock bootloader** entry from the side menus.

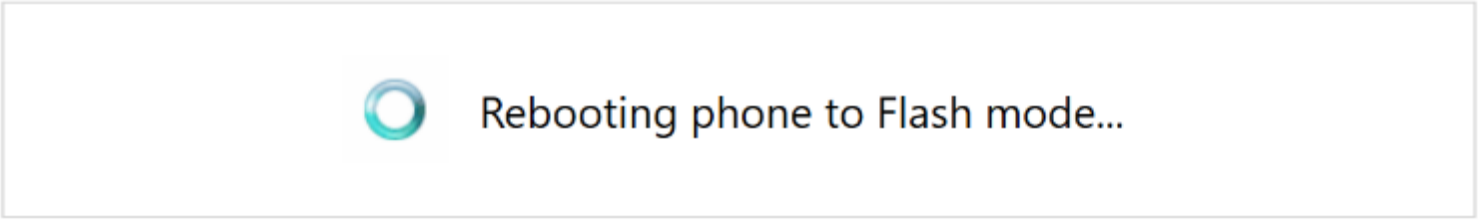


> You will get a prompt saying the phone needs to be booted to flash mode, click **OK** to it.



Then, it will display the below message.

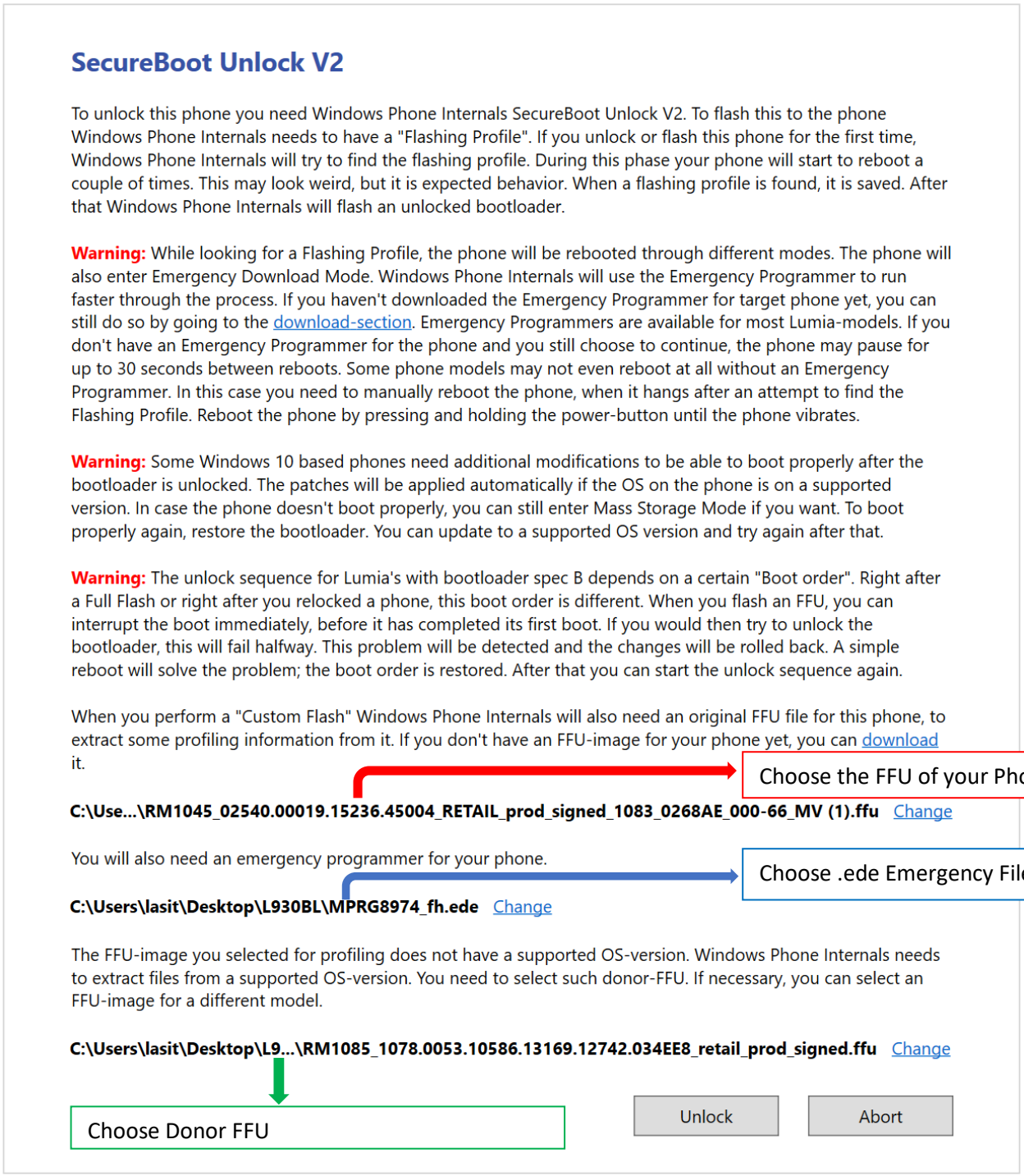
Your phone will now reboot out from Windows Phone OS to Flashapp (Dark blue background with two white arrows)



> Then, WPI will display the below page, it's recommened to read this section!

Scroll to the bottom and you will see the selections requiring you to select the files needed for the unlock; now, all left to do is to load the files you have downloaded for your device in correct order into these selections.

(*If you have downloaded the files using Windows Phone Internals itself, most of these selections will be already loaded*)

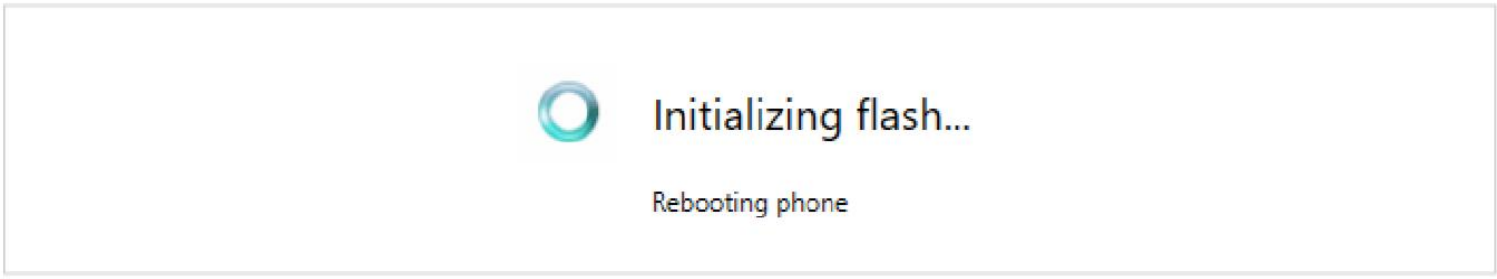


> Once all selected in the right order, click **Unlock** button.

TIP: *Make sure you are ready as steps that going to take place after this are un-skippable, if you are not ready, abort and do in a different time.*

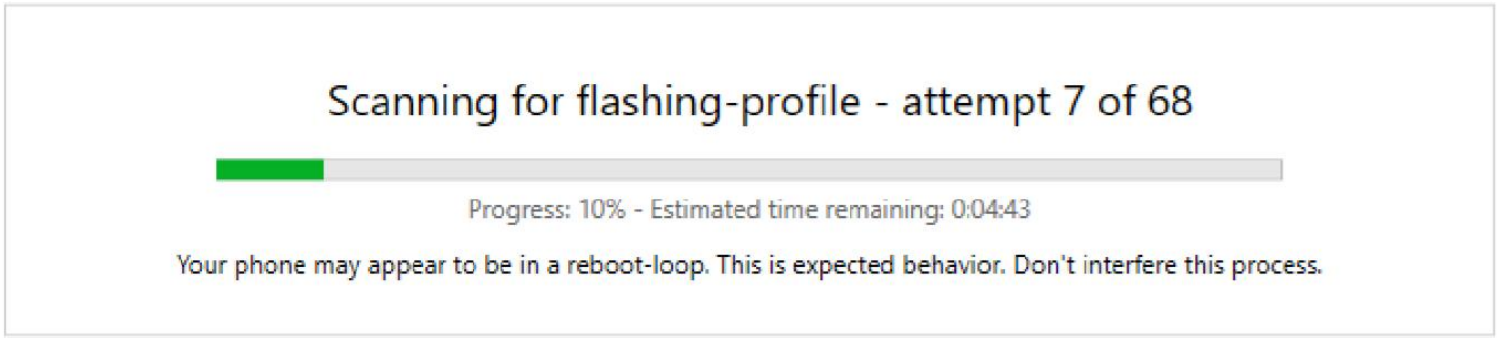
After clicking unlock, you will get the below window & your phone will reboot.

WARNING: Do not interfere with the Unlock process from now on, it may lead your phone to a *bricked* state.

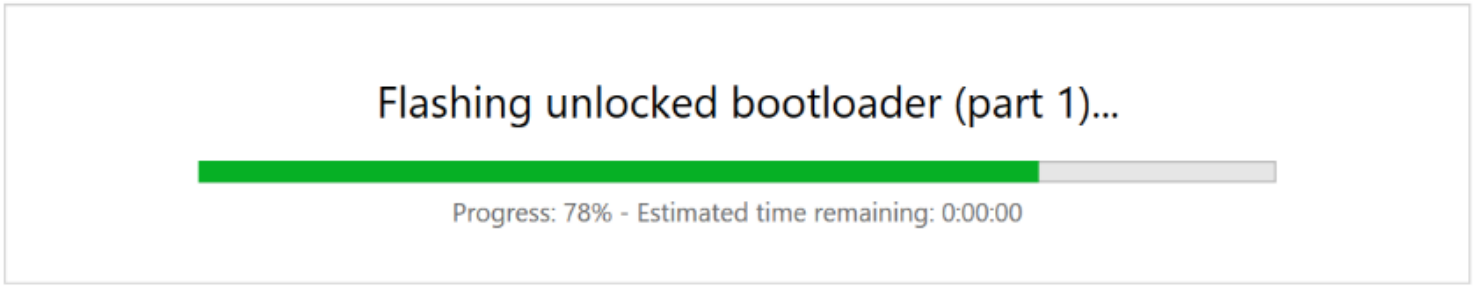


Then it will display "**Scanning for flashing Profile**" and **your phone will start to reboot constantly**.

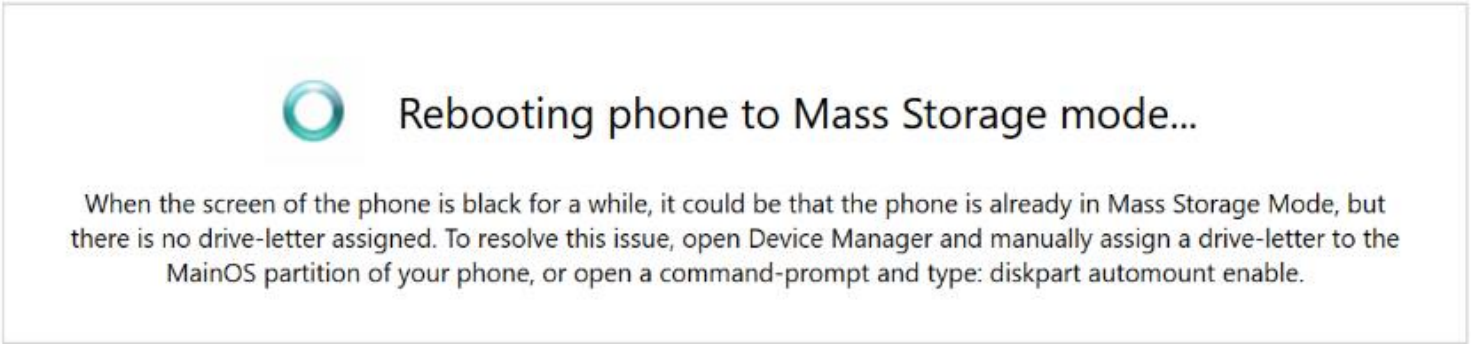
This may take some time so wait for it.



Once the correct profile is found, it will start the **Part 1** flashing.

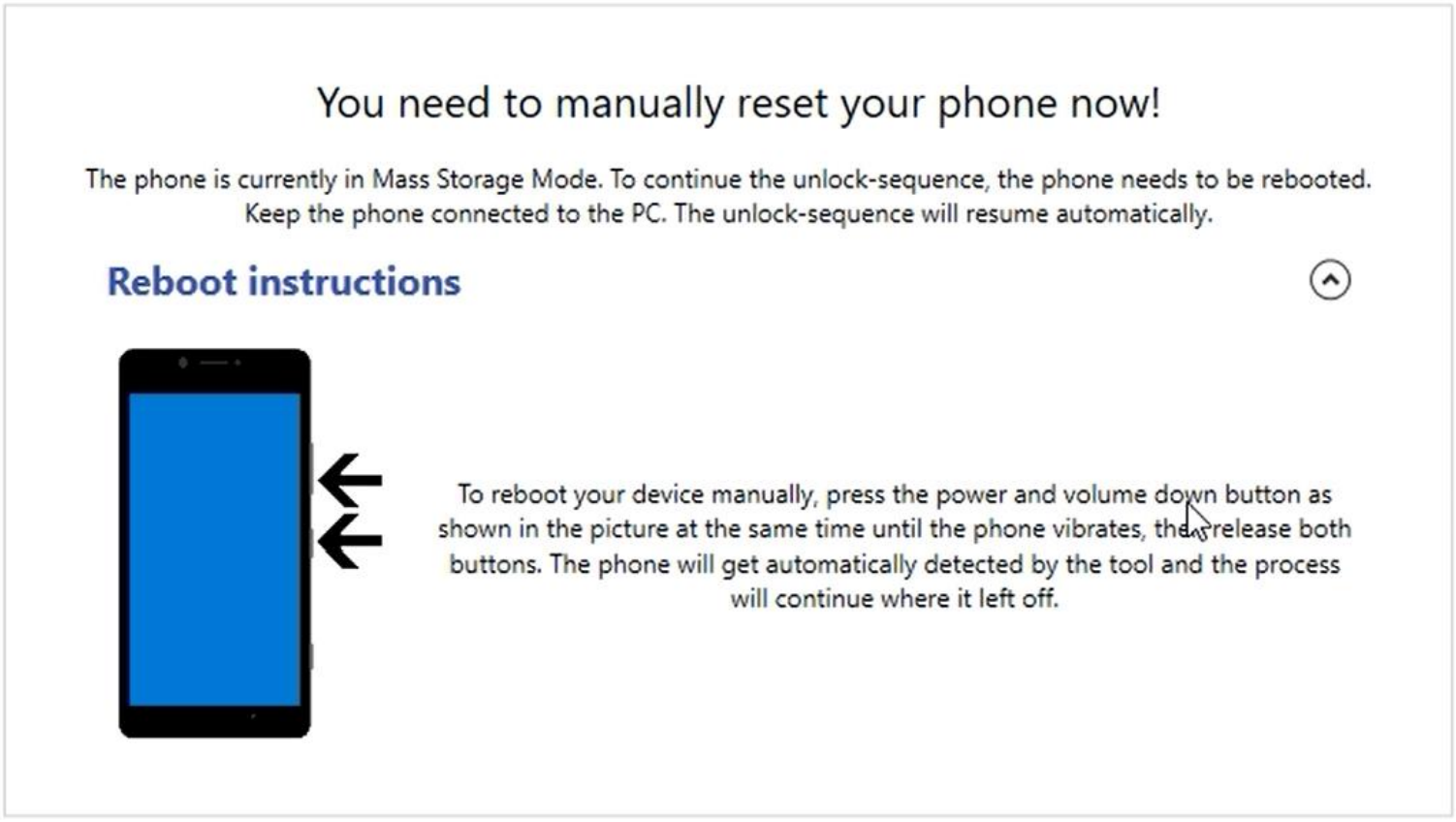


> After finishing Part 1 flashing, it will boot to Mass Storage Mode to patch System Files.

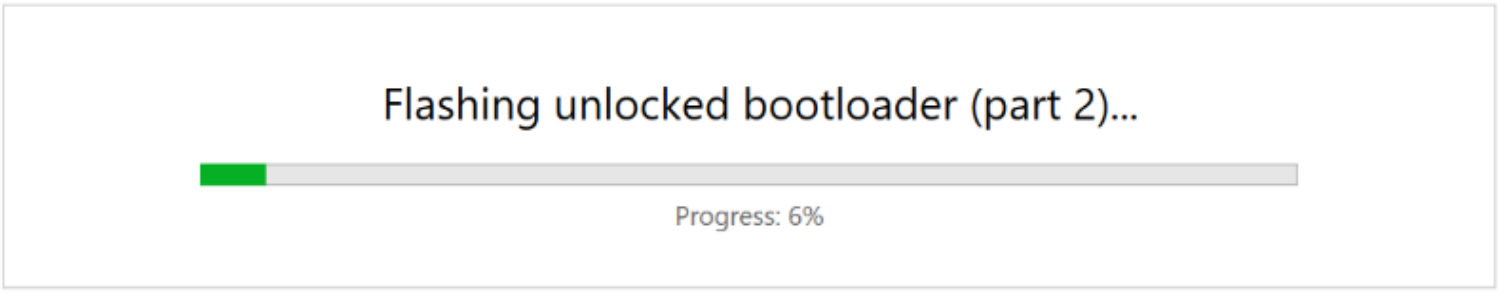


> When patching is done, you will need to boot out from Mass Storage Mode, but you will have to force it using a **Soft-reset**.

Soft reset: Press & hold volume down & power buttons until the phone vibrates.

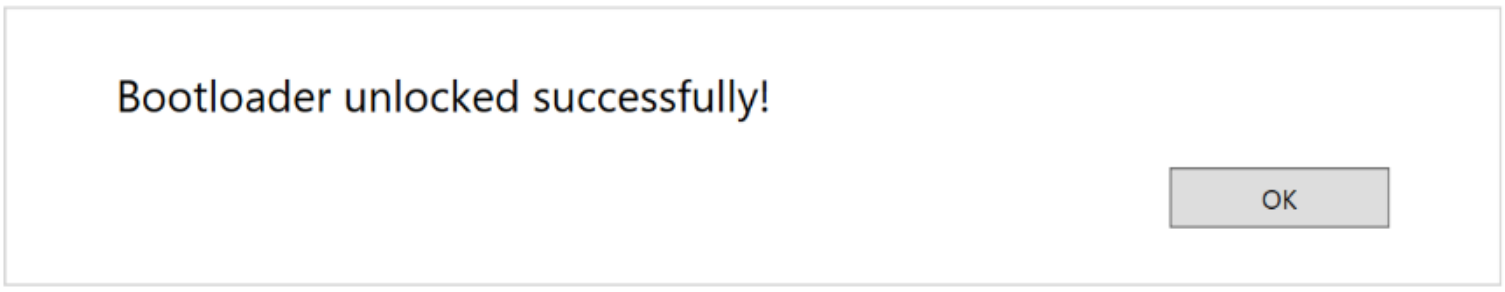


> Then it will automatically resume the process and will proceed to **Part 2** flashing.



> After finishing Part 2 Flashing, it will state "**Bootloader unlocked successfully!**"

(*If using WPI 2.9 versions, you will get the below prompt only after the phone boots back to the OS*)



The Bootloader is unlocked now & the work is **DONE!**

> Now you can;

- *Boot to Mass Storage Mode.*
- *Enable Root access.*
- *Flash Custom ROMS.*
- *Deploy WOA.*

And so much more….

POST NOTES (MANDATORY)

✘ **NEVER UPDATE THE DEVICE WHILE THE BOOTLOADER IS UNLOCKED!**

REASON: The files that got patched via the Bootloader Unlock will get replaced to the original state (Un-patched) with the update installation which will mess the unlock implementation.

RESULT: You will not be able to Boot into Mass Storage Mode, the device will keep booting to the OS no matter how much you try.

SOLUTION: Re-lock the bootloader & then re-unlock it.

✘ **DO NOT MESS WITH THE DEVICE PARITIONS OR FILES WHILE IN MASS STORAGE MODE!**

That includes;

- *Do not delete / Move / Modify System files.*
- *Do not grant permissions to every folder / files.*
- *Do not start any Disk Repairs even if prompted by Windows.*
- *Do not delete phone partitions via Disk management.*

RESULT: By doing so, you could cause irrecoverable damage to your device which might make the device just a paper weight as well.

Common WPI Errors & Workarounds

Q. After booting to Mass Storage Mode, my PC doesn't show the phone as a disk in File Explorer.

CAUSE: Auto drive assign is turned OFF in your PC.

SOLUTION: Open **Disk Management**, there **find a partition around 2-3 GB and assign a Drive Letter to it** while the device is already in Mass Storage Mode.

Q. When searching for Flashing profile, it exceeds the amount of tries (65/64) and then it starts a boot loop. What is causing this?

HOW TO GET OUT: Reflash the FFU by interrupting the boot process with WPI.

SOLUTION: Make sure you have rebooted the phone in and out of the Windows Phone OS at least one time successfully.

Q. When booting to Mass Storage Mode using WPI after the bootloader is unlocked, the phone restarts and boots to the OS instead of booting to Mass Storage Mode, what is the issue?

CAUSE: Your phone may have updated while the bootloader was unlocked, that will replace patched files.

SOLUTION: Relock the bootloader, and then unlock again.

Q. I'm getting "**Failed to write pipe XXXXX**" error during the unlock, what can I do to get pass it?

CAUSE: Something is interrupting the USB Data transfer, could be many things.

SOLUTIONS:

- Make Sure SD Card is Un-plugged.
- Make sure the USB connection is stable and the cable is not misbehaving.
- Make sure the USB Port is cleaned at both ends to keep the connection from dropping mid-unlock.
- Make sure you aren't unlocking too old Windows Phone 8 Build OR Unsupported Build.

Q. "**Bad GPT**" error appears as soon as I click the "Unlock" button, what is the cause of that?

CAUSE: The assigned / used Original FFU package OR Donor FFU package is **corrupted**.

SOLUTION: Re-download the Original FFU and/or Donor FFU packages.

Q. When switching to Mass Storage Mode during the Unlock, the below error shows up, how can I disable the encryption?

CAUSE: Device Encryption wasn't turned off prior to Bootloader Unlock as instructed in the guide.

SOLUTION: Boot back to Windows 10 Mobile & turn Device Encryption OFF in "*Settings → Update & Security → Device Encryption*"

Q. I got this error during the unlock in Windows Phone Internals, what to do?

CAUSE: WPI doesn't have required memory spared to operate.

SOLUTION: Free up some memory by closing unwanted software, unwanted processes, etc…in your PC.

Credits

- ✓ ReneLergner, Gustave Monce & all the other contributors of WPI

  (*Special credits to Gustave Monce for detailed info*)

- ✓ Microsoft for Windows Phones & official FFU & Emergency files.

That's all for this guide!

THANK YOU!!

Lasitha Samarasinghe